Species Reactivity: Human

Specificity: Detects human CEACAM-6/CD66c in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human CEACAM-1, -3, or -5 is observed. By flow cytometry, no cross-reactivity with CEACAM-3, -4, -7, or -8 is observed.

Source: Monoclonal Mouse IgG2A Clone # 439424

Purification: Protein A or G purified from hybridoma culture supernatant

Immunogen: Mouse myeloma cell line NS0-derived recombinant human CEACAM-6/CD66c Lys35-Gly320

Accession #: P40199

Conjugate: Allophycocyanin

Excitation Wavelength: 620-650 nm

Emission Wavelength: 660-670 nm

Formulation: Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.

*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
<tr>
<td>10 µL/10⁶ cells</td>
<td>See Below</td>
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DATA

Flow Cytometry

Detection of CEACAM-6/CD66c in Human Blood Granulocytes by Flow Cytometry. Human peripheral blood granulocytes were stained with Mouse Anti-Human CEACAM-6/CD66c APC-conjugated Monoclonal Antibody (Catalog # FAB3934A, filled histogram) or isotype control antibody (Catalog # IC003A, open histogram). View our protocol for Staining Membrane-associated Proteins.

Flow Cytometry

Detection of CEACAM-6/CD66c in HEK293 Human Cell Line Transfected with Human CEACAM-6/CD66c and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with (A) human CEACAM-6/CD66c or (B) irrelevant transfectants and eGFP was stained with Mouse Anti-Human CEACAM-6/CD66c APC-conjugated Monoclonal Antibody (Catalog # FAB3934A). Quadrant markers were set based on control antibody staining (Catalog # IC003A). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Shipping: The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage: Protect from light. Do not freeze.

- 12 months from date of receipt, 2 to 8 °C as supplied.
Carcinoembryonic Antigen-related Cell Adhesion Molecule 6 (CEACAM-6), previously called Nonspecific Cross-reacting Antigen (NCA) or CD66c, is one of seven human CEACAM family members within the immunoglobulin superfamily (1-4). In humans, CEACAMs include type I transmembrane proteins (CEACAM-1, -3, and -4) and Glycosylphosphatidylinositol (GPI)-linked molecules (CEACAM-5 through -8) (1). There is no human CEACAM-2. Human CEACAM-6 is a 90 kDa, GPI-linked membrane protein that contains a 34 amino acid (aa) signal sequence, a 286 aa extracellular domain (ECD), and a 24 aa hydrophobic C-terminal propeptide. The GPI membrane anchor is attached at the C-terminus following cleavage of the propeptide. CEACAM-6 contains one N-terminal V-type Ig-like domain (N domain), followed by two C2-type Ig-like domains (2-4). It shows considerable glycosylation, including (sialyl) LewisX, which mediates binding to E-Selectin, Galectins and some bacterial fimbriae (1, 2). Mature human CEACAM-6 shows 84%, 85%, 80%, 87% and 51% aa identity to the equivalent extracellular regions of human CEACAMs -1, -5 (CEA) and -8, rhesus CEACAM-2, and bovine CEACAM-6, respectively. CEACAM-6 is expressed by granulocytes and their precursors. Activation enhances surface expression by mobilizing CEACAM-6 from storage in azurophilic granules (5, 6). It often shows aberrant expression in acute lymphocytic leukemias (10). CEACAM-6 is also expressed in epithelia of various organs and is upregulated in pancreatic and colon adenocarcinomas and hyperplastic polyps (7, 8). Over-expression confers resistance to adhesion-related apoptosis (anoikis) in tumor cells (8, 9). CEACAM-6 is an intercellular adhesion molecule, forming both homotypic, and heterotypic bonds with CEACAM-1, -5 and -8 through interaction of the V-type Ig-like domains (11, 12). Cross-linking of neutrophil CEACAM-6 augments Integrin αβ3 and β2-mediated adhesion, apparently by Src and Caveolin-mediated inside-out Integrin activation (8, 13, 14).

References: